

Patent Claims

- SUB A1 > 1. A return device (1) for containers (2), such as bottles, cups, cans, or the like, comprising an insertion opening (3) for receiving the container and at least one distributing means (4) for transporting the container (2) from said insertion opening (3) to a selectable processing means of said return device, **characterized in** that said distributing means (4) comprises at least one intermediate bottom (5) and a receiving means (7) which is movable relative to said bottom, transports said container (2) away from said insertion opening (3) and is provided with a bottom opening (6), said intermediate bottom (5) being movably supported in said return device (1) and comprising at least one sorting opening (8) which can be positioned below said bottom opening (6) for passing said container (2) therethrough to the selected processing means.
2. The return device according to claim 1, **characterized in** that said return device (1) has arranged therein a support plate (9) which comprises a number of passage holes (10), each assigned to at least one processing means, and relative to which said intermediate bottom (5) is movable for arranging said sorting opening (8) between bottom opening (6) and selected passage hole (10).
3. The return device according to claim 1 or 2, **characterized in** that said receiving means (7) comprises a shell (12) which can be assigned with its open side (11) to said insertion opening (3).
4. The return device according to at least one of the preceding claims, **characterized in**

SUB A1 > that said intermediate bottom (5) is circular and rotatable about its center axis (13).

5. The return device according to at least one of the preceding claims,
characterized in
that said sorting opening (8) is designed as a radially outwardly open peripheral recess (14).
6. The return device according to at least one of the preceding claims,
characterized in
that said shell (12) is rotatably supported in coaxial fashion relative to said center axis (13).
7. The return device according to at least one of the preceding claims,
characterized in
that a bearing shaft (15) extends substantially in vertical direction from said support plate and has rotatably supported thereon shell (12) and/or intermediate bottom (5).
8. The return device according to at least one of the preceding claims,
characterized in
that said bearing shaft (15) is a hollow shaft (16).
9. The return device according to at least one of the preceding claims,
characterized in
that said passage holes (10) are arranged along a circle (17) in concentric fashion relative to said intermediate bottom (5).
10. The return device according to at least one of the preceding claims,
characterized in

SUB A1> that a guide (18) extends from each passage hole (10) to a corresponding processing means.

11. The return device according to at least one of the preceding claims,
characterized in
that at least one identifying means (19) is assigned to said insertion opening (3) and/or said receiving means (7) and/or said support plate (9) and/or said intermediate bottom (5) for identifying at least one characteristic feature of said container.
12. The return device according to at least one of the preceding claims,
characterized in
that the characteristic feature of said container is the geometrical shape thereof.
13. The return device according to at least one of the preceding claims,
characterized in
that a storage and/or evaluation means is assigned to said identifying means (19), in particular for storing different geometrical shapes of said container (2) and for comparing a container to be recognized with a stored shape.
14. The return device according to at least one of the preceding claims,
characterized in
that said identifying means (19) is designed as a scanning means and is movable relative to the container (2) to be scanned.
15. The return device according to at least one of the preceding claims,
characterized in
that said intermediate bottom (5) comprises a rotational sleeve (21) which is rotatably attached to the bearing shaft (15) of said support plate (9).

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16. The return device according to at least one of the preceding claims,
characterized in
that said shell (12) is held by means of a radial arm (22) by a bearing sleeve (23) which is rotatably attached to said rotational sleeve (21).
17. The return device according to at least one of the preceding claims,
characterized in
that said rotational sleeve (21) of said intermediate bottom (5) is rotatably supported in the hollow shaft (16) of said support plate (9) and a bearing shaft (24) of said receiving means (7) is rotatably supported in said rotational sleeve (21).
18. The return device according to at least one of the preceding claims,
characterized in
that said shell (12) of said receiving means and said intermediate bottom (5) are rotatable according to signals of said identifying means (19, 20).
19. The return device according to at least one of the preceding claims,
characterized in
that said intermediate bottom (5) is sector-like.